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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,998	04/18/2001	Fumio Takao	01244/LH	7639

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EXAMINER

GONZALEZ, JULIO C

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/836,998

Applicant(s)

TAKAO ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 February 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. The proposed drawing correction filed on 2/28/02 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pair of side surface portions disclosed in claims 1, 3 and 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claim discloses a pair of conductive members 3 and external electrodes 2 being spaced from the external electrodes. According to figure 2C, the external electrodes and the conductive are not spaced apart. According to claim 1, what is facing the multilayer surface, the conductive member or the

external electrode? From figure 2C, it seems like if the external electrode 2 is the feature facing the multiplayer surface.

Also, what is meant by "free end portion"? Where is this free end portion in the conductive member? What part of the multiplayer structure side is the "free end" spaced from? Center part? Upper side? Lower side?

In claim 3, what are the pair of side surfaces, the external electrodes or the conductive members? Are the side surfaces a complete independent part of the invention? It seems from figure 2C that the pair of side surfaces are the conductive member, is it?

In claim 4, how are the internal electrodes exposed of the side surface portions? It seems from claim 4 and figure 2C that the side surfaces are the external electrodes, are they?

In claim 6, what is meant by the internal electrodes having a face being flushed and retracted? Does it mean that that one side of the internal electrode touches only one side of the external electrode but the other side is not touched as shown in figure 2C?

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made

6. Claims 1-6 are rejected, AS UNDERSTOOD, under 35 U.S.C. 103(a) as obvious over Ueno et al (Patent # 5,866,196) in view of Mori.

Ueno et al discloses a multiplayer piezoelectric device having internal electrodes 2, external electrodes 3 which are connected to the internal electrodes. A pair of conductive member 4 connected to the external electrodes 3, a pair of side surfaces 7 and the internal electrodes have an end face which is flush with one of the side surface (see figure 13).

However Ueno et al does not disclose a pair of side surfaces.

On the other hand, Mori discloses for the purpose of providing a piezoelectric device less susceptible to damage that the piezo device has a pair of side surfaces 50a (see figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a piezoelectric device as disclosed by Ueno et al

and to modify the invention by placing a pair of side surfaces for the purpose of providing a piezoelectric device less susceptible to damage as disclosed by Mori.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno et al in view of Mori and Unami (Patent # 5,932,951).

Ueno et al discloses a multiplayer piezoelectric device having internal electrodes 2, external electrodes 3 which are connected to the internal electrodes. A pair of conductive member 4 connected to the external electrodes 3, a pair of side surfaces 7 and the internal electrodes have an end face which is flush with one of the side surface (see figure 13).

However Ueno et al does not disclose a pair of side surfaces.

On the other hand, Mori discloses for the purpose of providing a piezoelectric device less susceptible to damage that the piezo device has a pair of side surfaces 50a (see figure 4).

However, neither Ueno et al nor Mori disclose that the internal electrodes have insulation.

On the other hand, Unami discloses for the purpose of minimizing design and manufacturing of piezoelectric resonators thus enabling the piezo resonator in

narrow frequency bands that the internal electrodes 14 have insulation 18 (see figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a piezoelectric device as disclosed by Ueno et al and to modify the invention by placing a pair of side surfaces for the purpose of providing a piezoelectric device less susceptible to damage as disclosed by Mori and to modify the invention by having the internal electrodes with insulation for the purpose of minimizing design and manufacturing of piezoelectric resonators thus enabling the piezo resonator in narrow frequency bands as disclosed by Unami.

### ***Response to Arguments***

8. Applicant's arguments filed 2/28/02 have been fully considered but they are not persuasive.

The claims are not specific enough as to differentiate between the prior art and the present invention. For example, the claims recite that the conductive members have a free end portion that is spaced from the side surfaces of the multiplayer structure. Respectfully, Mori may disclose a conductive member 50a, which has some portions spaced from the side surface of the multilayer

structure (see figure 4). The base 52 and top part 48 are thicker than the multilayer structure 38 and the conductive member 50a is a straight plate, thus a space is made between the conductive member and the multilayer structure.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).



Application/Control Number: 09/836,998  
Art Unit: 2834


Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

May 20, 2002



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